

CLAIMS

1. Fouling reducing device for the tubes of a tubular heat exchanger of the type that comprises at least one turbulence generating element lodged inside one of the tubes of said exchanger and brought, during its use, in contact with an environment that contains hydrocarbons, namely crude oil, characterized in that said element, meant to come in contact with the hydrocarbons is made of a metallic alloy whose nickel content is greater than 50% by weight and furthermore includes at least one metal chosen from the group consisting of chrome and molybdenum to improve its resistance to corrosion.

2. Device as set forth in claim 1, characterized in that the metallic alloy of which it is made has a chrome content, TCr, and a molybdenum content, TMo, expressed in % weight of the alloy, so that the following relation is verified:

$$TCr + 3.3 \times TMo > 36\% \text{ by weight of the metallic alloy.}$$

3. Device as set forth in one of claims 1 or 2, characterized in that the metallic alloy of which it is made is comprised of the following metals, in the content ranges as indicated, in % by weight:

- nickel: between 55 and 65%
- chrome: between 20 and 25%
- molybdenum: between 5 and 10%
- niobium: between 2.5 and 4%
- iron: to complete at 100%

4. Application of the device as set forth in any one of claims 1 through 3, to exchangers used in crude oil refineries.